DUBROVSKIY, A.S., K SNEE, B.A., FETELV, b.I., YAND VSEAYA. F.A., red.

[Catalig and handbook in sewing equipment] hatalor - sprayornnik to shvelnomu operadovanilu. Moskva, It.2. 1963. 60 ;.

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PETROV. N.I.

An outstanding experiment in dairy cattle breeding. Est v snkole no. 4:14-27 J1-ag '53. (Mida 5:5)

1. Otdel zhivotnovodstva Upravleniya obshcheniya i vnedreniya dostizheniy nauki i peredovogo opyta Ministerstva sel'skogo khozyaystva i zagotovok SSSR. (Kholmogory District--Dairy cattle)

USSR/Medicine - Veterinary

Card 1/1

Parkov, m. -.

Author

: *Petrov, N. 1.

Title

: Advanced experience in veterinary service to animal humbs day

Periodical

: Veterinariya, 31, 20-25, May 1954

Abstract

: Cherkasskiy Rayon, Cherkasskiju Oblast, deserves special normendation for eralicating many diseases of farm animals by su cessel application of scientific principles and efficient farm management. Wazis infected a large number of cattle during their occupation. Fossibilities exist for those schooled in scientific facts to rollow the

Institution : Administration for General Application and Propagation of Colemnics and Advanced Methods in Animal Husbandry (Deputy Chief, *I. I. Jerrov)

Submitted

PETROV. N.I., zootekhnik.

Improve the quality of pamphlets (Series "Library of the Abkhazian collective farmer." Reviewed by N.I. Petrov). Zhivotnovodstvo 20 no.1: 95-96 Ja 158. (MIRA 11:1)

(Abkhazia -- Stock and stockbreeding)

PETREV. N. L

PRIROV, N.I., zootekhnik.

"Leading workers in dairy farming of North Kazakhstan." Reviewed by N.I. Petrov. Zhivotnovodstvo 20 no.2:95-96 F '58. (MIRA 11:1) (North Kazakhstan Province--Dairying)

VESELOV, S.I.; GUSHCHINA, N.; MAKUSHKIN, L.G.; RULINA, L.B.; GELCHILO, I.K.; SHABUNDE, Ye.M.; CHILIKIN, M.G., prof.; YUSHKOV, S.B.; GOSIS, I.N.; RYABTSEV, N.I.; KENPOVIDE, V.I.; PETEOV, M.I.; PATARLIYM, A.D.; BEYRAKH, Z. Ya., dontor tekhn. nauk

Twenty-first anxiversary of the miblication "Promyndennaia energetika". Prom. erer. 21 to. 185-7 Ja (6) (8) 4 (4:1)

1. Nachal nik Gosudarstvennoy inspektsii po energetioneskomi nadzoru Ministerstva energetiki i elektrifikatsii SSSR (for Veselov). 2. Moskovakoye pravleniye nauchno-tekhnicheckogo obshchestva energeticheskoy promychlennosti (for Gushchina).
3. Predsedatel' Sverdlovskogo pravleniya Nauchno-tekhnicheckogo obshchestva energeticheskoy promyshlennosti (for Makushkin).
4. Glavnyy energetik Perroge grandarstvennogo podship ikovego zavoda (for Chichilo). 6. dlavnyy energetik Moskovskogo me illurgicheskogo zavoda Serp : molot* (for Shah in). 6. hektor Moskovskogo energeticheskogo instituta (for Chilikin). 7. Glavnyy inzhener instituta Tyazh reme ektroproyekt (for Krupovich).
8. Glavnyy konstruktor Moskovskogo zavoda teplovoy avtomatiki (for Beyrakh).

EXTLYARRAYSKIY, D.M.; MELTYPHLETTII, A.N.; PATT, E.; CKCREC, L.C.;
PETROW, N.I.; PURPOR, V.A.; CHEMATICA, V.I.; PATTHERMS

[Mo Tsung-far.]

Energy spectra and angular correlations of particles in KO → M² + e² + V decays. IAd. fiz. 1 no.6:1036-1044.

Je '65.

1. Ob"yedinennyy institut wadernykh isaledovaniy i instit t fiziki AE Gruzinskoy Ede.

IONOV, B.I.; PETROV, N.I., redaktor; KONSTANTINOV, V.P., redaktor; KRAS-HAYA, K.K., tekhnicheskiy redaktor

[Practical guide for ship radio operators] Prakticheskoe rudovodstvo sudovomu radistu. Izd. 2-e, perer. i dop. Moskva, Izd-vo Ministerstva rechnogo flota SSSR, 1952. 219 p. [Microfilm] (MIRA 8:7) (Radio in navigation)

DZHELEPOV, V.P.; KOZOMAYEV, M.S.; OSIPENKOV, V.T.; PETROV, M.I.; RUSAKOV, V.A.

Wilson chamber in a pulse magnetic field used in synchrocyclotron nuclear investigations. Prib.i tekh.eksp. no.3:3-9 N-D '56.

(MLRA 10:2)

1. Ob"edinennyy institut yadernykh issledovaniy. (Cloud chamber) (Cyclotron)

ITTICV 5

AUTHOR:

DZELEPOV, V.P., IVANOV, V.C., KOZODAEV, H.G.,

PA - 2003

OSIPENKOV, V.T., PETROV, N.I., RUSAKOV, V.A.

TITLE:

Interaction between Negative Pione and Carbon-and Lead Nuclei in

the Case of Energies of from 230 up to 250 MeV.

PERIODICAL:

Zhurnal Eksperimental'noi i Teoret.Fiziki, 1996. Vol 31. Nr 6,

pp 923-931 (U.S.S.R.)

Received: 1 / 1957

F iewed: 3 / 1957

ABSTRACT: This work was carried out on the synchrocyclotron of the Institute for Nuclear Problems of the Academy of Sciences in the USSR; it investigates the interaction mentioned in the heading by the method of the WILSON chamber which is located in a magnetic field.

The experimental device and the method for the treatment of the photographs. A graphite target served as a source for negative pions; it was arranged in the chamber of the accelerator within the circulating bundle of the 670 MeV protons. The 230-250 MeV pions emitted in a forward direction from the target were directed by means of alarge collimator and a deflecting magnet towards a WILSON chamber situated behind a concrete shield. In the chamber a plate of the material to be investigated was mounted under anangle of 90° with respect to the direction of the incident bundle of pions. The traces were photographed by means of a stereo camera. - Experimental results: 760 cases of 6000 photographs were found to represent cases of nuclear interaction between pions and carbon, and 229 others represented cases of interaction between pions and lead. Examples of such interactions are supplied in form of attached photographs. The following facts were CARD 1/2

Interaction between Negative Pions and Carbon-and Lead PA-2003 Nuclei in the Case of Energies of from 230 up to 250 MeV.

established in the course of work carried out with the experimental material: A) The total and differential cross sections of elastic scattering within the range of the scattering angles of from 10 to 180°. B) The total and differential cross sections of nonelastic scattering, C) The energy distribution of the nonelastically scattered pions, D) The total cross sections of all nonelastic interaction processes. All cross sections measured for carbon- and lead nuclei referred to energies of 230+30 MeV and 250+30 MeV respectively

Summary: The measured angular distributions and the total cross sections of the elastic scattering of pions in the case of scattering angles of θ > 10° as well as the total cross sections of nonelastic interaction are satisfactorily described by the optic model of interaction between pions and composed nuclei. Nonelastic scattering within the range of the scattering angles of from 60 to 180° is chiefly due to simple collisions between impinging pions and single nucleons of the nuclei. The absorption of pions in the nuclear material takes place (also at lower energies) above all as a result of the capture of nuclear nucleons by (p-n) rairs. The total cross sections of the nonelastic interaction processes of pions are equal to geometric cross sections.

ASSOCIATION: Institute for Nuclear Problems of the Academy of Sciences in the USSR PRESENTED BY:

Submitted:

AVAILABLE: Library of Congress.

CARD 2 / 2

PETROV N. I.

CARD 1 / 2 PA - 1852USSR / PHYSICS **SUBJECT**

IVANOV, V G PETROV N I., RUSAKOV, V.A., BUDAGOV, JU.A., AUTHOR

OSIPENKOV, V.T-

Showers in Lead which are Produced by Electrons with the Energy TITLE

of 360 + 30 MeV

Žurn.eksp i teor fis, 31. fasc. 6, 1095-1096 (1956) PERIODICAL

Issued 1 / 1957

The data on electron showers published by the present report were determined in the course of the investigation of the results obtained by experiments carried out for the purpose of studying the interaction between negative pions and lead nuclei. The experiments were carried out with the synchrocyclotron of the Laboratory for Nuclear Problems by means of a WILSON chamber of 400 mm diameter in a magnetic field having a field strength of 104 Ørsted. The pion bundle passing through a lead plate (thickness 4,6 g.cm-2) located inside the chamber contained (2 + 1)% electrons Therefore, also cases connected with the production of electron showers in the lead were photographically recorded besides acts of nuclear interaction On this occasion 159 showers were registered which were excited by electrons with energies of from 330 to 390 MeV. An attached photograph shows such a shower This number (159) does not include a few cases in which primary electrons came to a standstill in the lead plate, for it is practically impossible to separate them from the many pions which came to a standstill. When computing the number of particles contained in the showers only the secondary electrons with E \gg 8 were considered. By this

Zurn.eksp.i teor fis, 31, fasc 6,1095-1096 (1956) CARD 2 / 2 PA - 1852 critical selection for secondary electrons such errors were eliminated as are connected with the existence of a background of electrons with low energies in the chamber. The distribution of the showers over the number of particles, which was found in the course of the experiment, is shown in a table. For reasons of compari-

The distribution of the showers over the number of particles, which was found in the course of the experiment, is shown in a table. For reasons of comparison the last column of this table shows the distribution of showers (corresponding to POISSON'S theorem) over the number of electrons. The average number of electrons in a shower according to the data given by the table amounts to 1.77. The energy distribution of the secondary electrons is illustrated by a table. Within the limits of measuring accuracy the average number of secondary electrons in the shower, which was obtained by the above measurements, agrees with the corresponding experimental results obtained by CH.A.O'ANDLAU. Nuovo Cim. 12.859 (1954) and also with the value obtained by R.B.WILSON, Phys Rev 86, 201 (1952) by computing the electron cascade in lead by means of the MONTE CARLO method. The above is a translation of this short report.

INSTITUTION: United Institute for Nuclear Research (The name of this institute appears here for the first time).

PETRIVIN I.

CARD 1 / 2 USSR / PHYSICS SUBJECT

IVANOV, V.G., OSIPENKOV, V.T., PETROV, N.I., RUSAKOV, V.A. The Total Cross Sections of the Nonelastic Interaction of AUTHOR TITLE

Negative Pions with the Nuclei of C, Al, Cu, Sn, and Pb at an

Energy of 225 + 10 MeV.

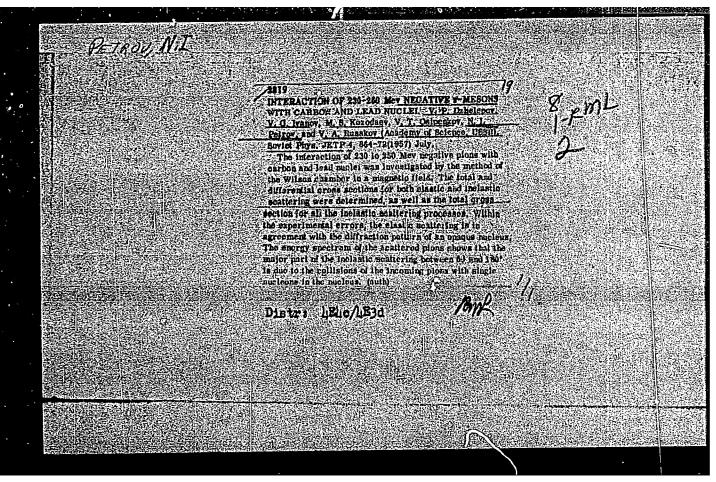
Zurn.eksp.i teor.fis,31,fasc.6.1097-1097 (1956) PERIODICAL

Issued: 1 / 1957

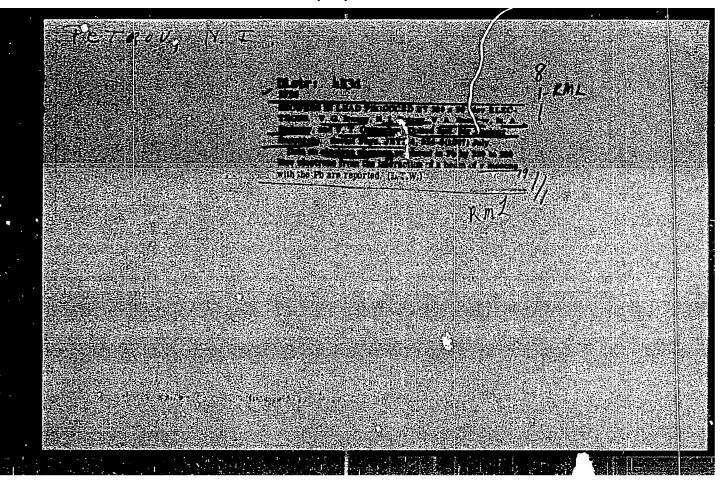
By making use of the synchrocyclotron of the Laboratory for Nuclear Problems the authors determined the above mentioned total cross sections. On the occasion of these measurements the losses of particles out of the bundle on the occasion of the passage of the particle through a scatterer made from the material to be investigated were determined. The average loss angle was 30° mesons were registered by means of a telescope consisting of three scintillation counters. The first and the second counter contained tolan crystals, and the third contained as scintillator a solution of terphenyl in toluene. With the help of the first two counters the pions inciding upon the scatterer were counted, whilst the third registered the particles passing through the scatterer. In front of the third scatterer there was a lead filter (thickness 5,85 g/cm²) which was to absorb the heavy charged particles produced on the occasion of the interaction between the plons and the nuclei of the scatterer. For the purpose of determining the number of times that pions were lost ost of the bundle, double and triple coincidences were counted at the same time. The energy of the pions inciding upon the scatterer as well as the total admix-

Žurn.eksp.i teor.fis,31,fasc.6,1097-1097 (1956) CARD 2 / 2 ture of myons and electrons were determined separately from measuring the curve of the absorption of pions in lead. These measurements were carried out under the same geometric conditions as in the case of the experiment described. The following results were obtained: The energy of the pions in the bundle amounts to 230 + 6 MeV and the admixture of myons and electrons in the bundle is 12,5 + 3%. The thickness of the scatterer was on the average 5-6 g/cm2, and therefore the average energy of the pions, to which measurements of the cross sections refer amounted to 225 + 10 MeV. Into the cross sections measured here corrections were introduced on the basis of the work by V.P.DZELEPOV et al, Žurn.eksp i teor.fis,31,fasc.6, 23 (1956), which took account of the following facts: a) the nonelastic scattering of pions into the angular range of from 0° to 30°, b) the elastic scattering of pions into the angular range of 30° to 180°, c) the fast secondary protons registered by the third counter The total cross sections of the nonelastic interaction between plons and nuclei, which were found in this manner, are shown in a table. At an energy of 225 MeV these cross sections are equal to the geometric cross sections of the corresponding nuclei. Within the limits of measuring accuracy these results agree with those obtained by similar tests carried out by A E IGNATENKO et al , Dokl. Akad. Nauk, 103, 209 (1955).

INSTITUTION:



"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240510006-2



21 (7), 21 (1)

Ivanov, V. G., Osipenkov, V. T.,

SOV/56-37-3-47/62

AUTHORS:

Petrov, N. L., Rusakov, V. A.

TITLE:

The Cross Sections of Elastic Scattering of Positive $\pi ext{-Mesons}$

With Energies of 195 Mev by Carbon- and Lithium Nuclei

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959,

Vol 37, Nr 3(9), pp 863 - 866 (USSR)

ABSTRACT:

Measurements of elastic scattering cross sections by means of

a cloud chamber which was located in a magnetic field

(13,500 0e) were carried out on the synchrocyclotron of the Institute mentioned below (cf. the previous paper in refer-

ence 1). A polythene block $(25g/cm^2)$, which was exposed to a

670-Mev proton beam, served as a π^+ -source. The targets con-

sisting of a natural isotope mixture had a thickness of

1.72 $g/cm^2(C)$ and 0.8 $g/cm^2(Li)$, respectively. The experimental method as well as the method of evaluating the photo records were the same as in reference 1. By taking into account the corrections concerning the accuracy of observation, 410 elastic meson scatterings on C-nuclei and 243 on Li-nuclei were

Card 1/3

The Cross Sections of Elastic Scattering of Positive SOV/56-37-3-47/62 n-Mesons With Energies of 195 Mev by Carbon- and Lithium Nuclei

recorded within the scattering-angle range of $10-180^{\circ}$. The following was obtained:

Nucleus	Pion Energy	Sign of the Picn	oelast (10°)	πR ²
c	195	+	204 <u>+</u> 26 mb	325
Li	195	+	156 <u>+</u> 26 mb	226
C	230	-	200 <u>+</u> 31 mb	325

The results are briefly discussed. They agree satisfactorily with the data calculated by other authors (among them Osipenkov and Filippov, Ref 3) on the basis of the optical model and square well interaction potential. For carbon the elastic scattering angle distribution measured in the course of the experiments is represented in figure 1, and for lithium in figure 2. The curves traced in full represent the angular distributions calculated according to the optical model in semi-

Card 2/3

The Cross Sections of Elastic Scattering of Positive π-Mesons With Energies of 195 Mev by Carbon- and 807/56-37-3-47/62 Lithium Nuclei

> classical approximation (calculated by means of the formulas taken from the book by Akhiyezer and Pomeranchuk, Ref 4). Calculation of the curves was carried out for a nuclear radius $R = 1.4 \text{ A}^{1/2}:10^{-13} \text{ cm}$, the absorption coefficient of the pions in nuclear matter K is assumed to be 0.93:1013 cm, and the real part of the potential V to be zero (Curve A), 30 Mev (Curve B), and for curve V it is assumed that $K = \infty$ and V = 0. There are 2 figures, 1 table, and 7 references, 3 of which are Soviet.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED:

May 28, 1959

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Card 3/3

PETROV, N.I.; IVANOV, V.G.; RUSAKOV, V.A.

Monelastic scattering and absorption of \$\pi^+\$—messons with energies of 195 15 MeV by carbon and lithium nuclei. Zbur. eksp.i teor.fiz. 37 no.4:957-965 0 '59.

(MIR. 13:5)

1. Ob"vedinennyy institut vadernykh issledovaniy.

(Mesons)

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82601

S/056/60/039/01/10/029 B006/B070

24.6810

AUTHORS: Okonov, E. O., Petrov, N. I., Rozanova, A. M. Rusakov, V. A.

TITLE:

Four-pronged Decay of the Long-lived KO-Meson

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960.

Vol. 39, No. 1 (7), pp. 67-69

TEXT: A cloud chamber was exposed to a neutral particle beam of the proton synchrotron at the OIYaI (Joint Institute of Nuclear Research) Out of 140 K^O decays recorded, one four-pronged decay was found (at 8 m distance from the inner target). A photograph of this event is given on an insert between pages 64 and 65. The tracks to be seen on this photograph and denoted by A, B, C, D are discussed in the introduction and the results obtained from measurements of the tracks are tabulated (momentum, sign of the charge, angles). All possible ways of explaining this event are next considered. The conclusion is that considering all data of measurement as well as the CP-invariance, only the following possibilities remain:

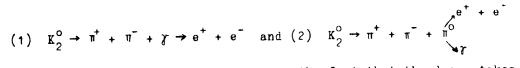
Card 1/2

"APPROVED FOR RELEASE: 06/15/2000

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Four-pronged Decay of the Long-lived K⁰-Meson S/056/60/039/01/10/029 B006/B070

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The subsequent discussion establishes the fact that the decay takes place according to mode (2). The authors thank B. M. Pontekorvo for his interest in the work, M. I. Podgoretskiv for discussions, <u>D. Nyag</u> for help in calculations, and <u>M. Kh. Anikina</u> and <u>P. I. Zhabin</u> for taking part in the measurements. There are 1 figure, 1 table, and 8 references: 2 Soviet, 5 American, and 1 Italian.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: March 18, 1960

Card 2/2

ANIKINA, M.Kh.; NEAGU, D.; OKONOV, Ye.O.; PETROV, N.I.; ROSANOVA, A.M.; RUSAKOV, V.A.; SARANTSEVA, V.R., tekhn. red.

An experimental investigation of CP-invariance consequences **K2** decays. Dubna, Obⁿedinennyi institut iadernykh issledovanii, 1961. p.8.

(No subject heading)

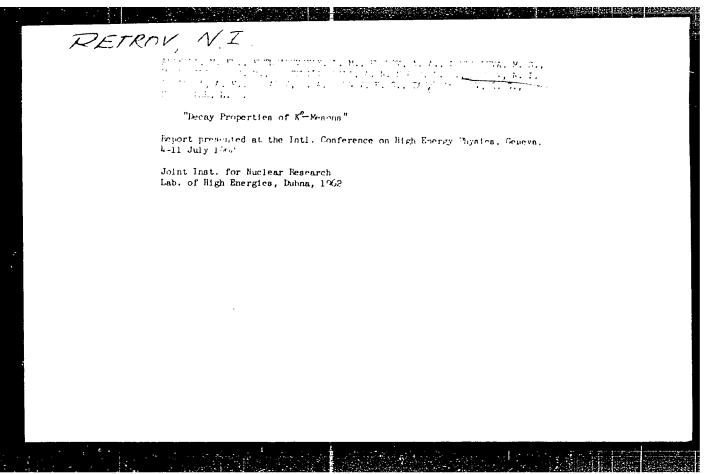
PETROV, N. I., Cand Phys-Math Sci -- "Reaction of positive M-mesons with nuclei of carbon and lithium." Dubna, 1961. (Mos Order of Lenin and Order of Red Banner State U im M. V. Lomonosov. Inst of Nuclear Phys) (KL, 8-61, 227)

- 34 -

NYAGU, D.V.; OKONOV, E.O.; PETROV, N.I.; ROZANOVA, A.M.; RUSAKOV, V.A.

Experimental verification of the Δ I= 1/2 selection rule for lepton decay of K-mesons. Zhur. eksp. i teor. fiz. 40 no.6:1618-1624 Je '61. (MIRA 14:8)

1. Ob*yedinennyy institut yadernykh issledovaniy.
(Nuclear spin)
(Mesons—Decay)



PETRICU 4004 5/016 62/042 60 16/1,044 B 104/B 132 24.6700 Anikina M. Kh., Njagu, L. V., Okonov u. G., Petrop, N., Rozenova, a. M., Rusakov V. A. AUTHURS. Experiments, investigation of some order as a 100 ITTE invariance in Ko meson secaps In mraw eksperimental hop interpetion-aks of viking more FERTODICAL 902 - 10 - 34 TEXT: The application of GP invariance to the decay of neutral K me as leads to three conclusions of The recap of a line invest K -movement tw. plots is fortigien; (3) in three particle legion recays the Tato retween the probabilities of emission of negative and positive plans is about number times more probable than the relevant decay of a success Invert K^0 -meson. At the proton sympotron of the Joint Institution Nuclear Research as much as 649 long-lived K^0 -meson decays were record

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was detected. This result evidences. The equality tetween the probabilities	ts while analyzed above the trace of the (a) opposition of the momenta of detayed particles at the momenta of services particles at the days of the avoidable two charged particles at the CF invariance is applicable to the charged particles of the charged particles at the CF invariance is applicable.
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S/016/62/042/001/031/048 B104/B102

Experimental investigation of

thanked for the synchrotron experiments, B. M. Pintekorvo for his interest. V. I. Veksler and V. P. Izhelerov for cooperation, and F. I. Zhabin. V. A. Smirnov, L. Filatova, and N. Kurilina for help in the measurements. There are intalled and increferences: 3 Soviet and incon-Soviet. The four most recent references to English-language publications read as follows, M. Bardon, K. Lande, L. Lederman, Ann. of Phys. 5, 16, 1998; F. Mullion, O. Pippioni et al., Phys. Rev. Lett., 4, 418, 1960; D. Neagur, E. C. Charles, N. J. Petrov, A. M. Risanova, V. A. Rusakov, Phys. Rev. Lett., 5, 1996; T. Lee, C. Yang, Phys. Rev., 119, 1410, 1960.

ASSOCIATION Obligedingmay institut paternykh issledovanic Joint Institute of Nuclear Research)

SUBMITTED September 2 '36'

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ANTEIRE: Nyagu. I V., Konov. . . . , Petrov, N. I. Romann &

Ruchesv, V. A.

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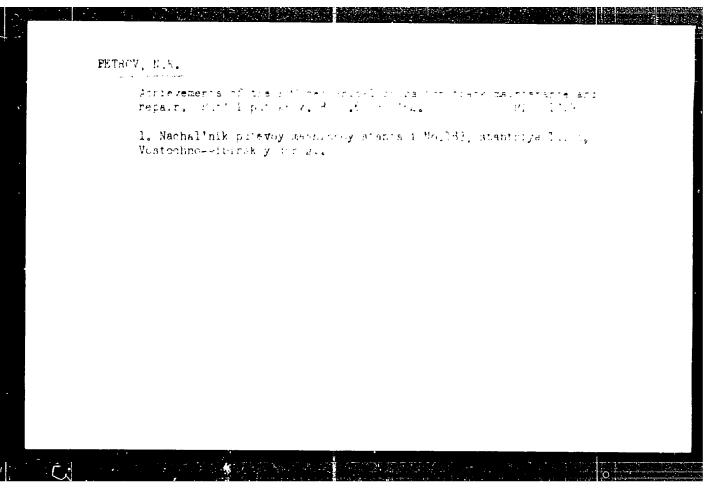
tion entry) proton symbol tron striking a thin seed target to the bounds studied with the aid of a cloud gramber. Cut of 440 \dot{M} every this contribution proton were selected visually. The mean mass of the decayor parameters are

was three 6 Mev which agrees well with the A by teron made. This mean entitle

of the registrated $\Lambda^{\rm C}$ upperons was 45 NeV . All the electric entre with the constant

to the decay $\bigwedge^0 \longrightarrow p$. The estimate products notice of the cyberons on Ph nucle. is 100 \pm 70 mb. The low number of charter hyperical observed is due to the strong absorption indicate the Pt rule and the law land.

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ANIKINA, M.Kh.; GOGITIDZE, O.N.; ZHURAVLEVA, M.S.; KOZLOV, A.A.;
KOTLYAREVSKIY, D.M.; MANDZHAVIDZE, Z.Sh.; MESTVIRISHVILI, A.N.;
NYAGU, D.; OKONOV, E.O.; PETROV, N.I.; ROZANOVA, A.M.;
RUSAKOV, V.A.; TAKHTAMYSHEV, G.G.; CHKHAIDZE, L.V.; U TSZUN-FAN'
[Wu Tsung-fan]; TSERELOV, A.A.

Observation of $K_2^0 \rightarrow \widetilde{n}^+ + \widetilde{n}^- + \widetilde{n}^-$ decays. Zhur. eksp. i teor. fiz. 45 no.3:469-473 S 163. (MIRA 16:10)

1. Ob"yedimennyy institut yadernykh issledovaniy i Institut fiziki AN Gruzinskoy SSR.

(Photography, Particle track) (Mesons)

ACCESSION NR: AP4012523

s/0056/64/046/001/0059/0066

AUTHORS: Anikina, M. Kh.; Zhuravleva, M. S.; Kotlyarevskiy, D. M.; Mandzhavidze, Z. Sh; Mestvirishvili, A. N.; Nyagu, D. V.; Okonov, E. O.; Petrov, N. I.; Rusakov, V. A.; Takhtamy*shev, G. G.; Chkhaldze, L. V.; Wu, Tsung-fan

TITLE: Estimate of the relative possibility of the $K_2^0 \rightarrow 3\pi^0$ decay

SOURCE: Zhurnal eksper. i teoret. fiz., v. 46, no. 1, 1964, 59-66

TOPIC TAGS: K₂ decay, Dalitz pair, neutral kaon decay, CP invariance, selection rules, V sup 0 event, ionization selection rule

ABSTRACT: Continuing an earlier investigation (D. V. Nyagu, E. O. Chonov, N. I. Petrov, A. M. Rozanova, and V. A. Rusakov, ZhETF v. 40, 1618, 1961), the authors registered the $K_2^0 \rightarrow 3\pi^0$ decay by the Dalitz pairs observed in a one-meter cloud chamber placed in a beam of neutral particles from a proton synchrotron, using an experimental Cord 1/3

ACCESSION NR: AP4012523

setup described earlier (ZhETF v. 45, 469, 1963). Applying more stringent selection rules, they found the ratio of the probability of the $K_2^0 \rightarrow 3\pi^0$ decay to the probability of all K_2^0 meson decays to be (0.24 ± 0.08) . "We thank the proton synchrotron crew, whose precise work enabled us to set up the project. We are deeply grateful to B. M. Pontecorvo who called attention to the possibility of investigating $K_2^0 \rightarrow 3\pi^0$ decay by means of Dalitz pairs and for numerous discussions. We are grateful to E. L. Andronikashvili, V. I. Veksler, and V. P. Dzhelepov for collaboration, and also to the group of laboratory assistants and particularly student Yu. Luksty*n'sh of Riga University for participating in the measurements." Orig. art. has: 2 figures, 1 formula, and 1 table.

ASSOCIATION: Ob"yedinenny*y institut yaderny*kh issledovaniy (Joint Institute of Nuclear Research): Institut fiziki AN GruzSSR

Card 2/3

ACCESSION NR: AP4012523

(Physics Institute, AN GruzSSR)

SUBMITTED: 10Jul63 DATE ACQ: 26Feb64

ENCL: 00

SUB CODE: PH NO REF SOV: 004

OTHER: 006

Card 3/3

ACC NR. AP6015706

SOURCE CODE: UR/0413/66/000/009/0107/0107

INVENTOR: Petrov, N. I..

ORG: None

TITLE: A device for generating pulses with a duration proportional to the square of the input pulse repetition frequency. Class 42, No. 181395

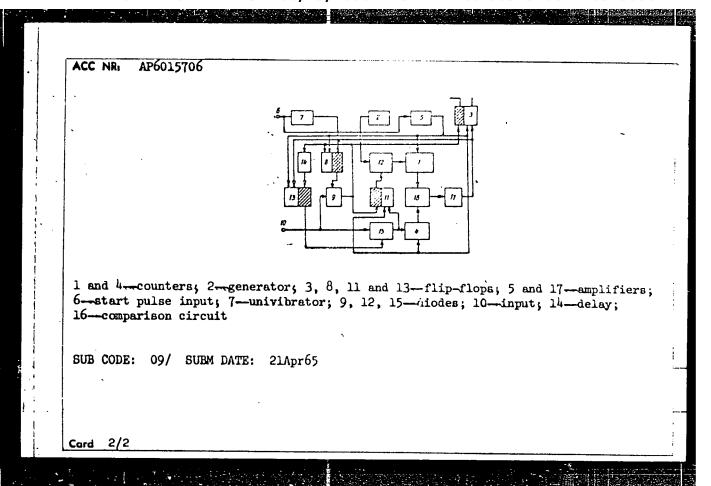
SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 9, 1966, 107

TOPIC TAGS: pulse generator, flip flop circuit, pulse recurrence

ABSTRACT: This Author's Certificate introduces a device for generating pulses with a duration proportional to the square of the input pulse repetition frequency. The unit contains an auxiliary generator, two counters and a comparision circuit. The frequency range is expanded by connecting the input of the first counter through a diode to the auxiliary generator, while the input of the second counter is connected through another diode to the input of the pulse generator. The control inputs of the diodes are connected to the outputs of two flip-flops with set terminals connected to a circuit for isolating the first pulse. The set terminal of the flip-flop which shapes the output pulse is connected to the output of the circuit for isolation of the first pulse, while the reset terminal of this flip-flop is connected to the comparison circuit tied to the counters.

Card 1/2

UDC: 681.142.07



domostr	avodsk Housing Ponstruction oiteliny: kombinat. Fetroza e izd-vo, 1964. 38 p.	Combine) (2000) vodsk, Kanalityko (800)
l. Nauc obrabat pravlen	nmo-teknnicheskope coshchest yvayushoney prospsinieraws:1. iye.	vo bunazhni. Kanelicki

sov/113-58-11-5/16

AUTHORS: Whanin, N.S., Petrov, N.I., Candidates of Technical Sciences

TITLE: The Turbosupercharging of Compression Ignition Automobile Engines (Turbonadduv avtomobil'nykh dvigateley s vosplame-

neniyem ot szhatiya)

FERIODICAL: Avtomobil'naya promyshlennost', 1958, Nr 11, pp 17 - 21,

(USSR)

ABSTRACT: The article discusses the advantages of turbosupercharging

for diesel and other automobile engines. The indices of mostly 4-cycle serial automobile engines with radial turbomostly 4-cycle serial automobile engines with radial turbosuperchargers of American, English, and West-German make are superchargers of American, English, and West-German make are tabulated (table 1) and critically examined. Experiments to conducted by NAMI confirmed similar investigations by the West German firm of MAN that the maximum capacity of the West German firm of MAN that the maximum capacity of the WAN engines with turbosupercharging can be increased by 40% as compared with the basic engines. In conclusion, the authors state that turbosupercharging is one of the promising means to increase the specific capacity of automobile diesel

means to increase the specific capacity of anomy. The applicard 1/2 engines with a simultaneous increase in economy. The applicant discretization of the control of the con

The Turbosupercharging of Compression Ignition Automobile Engines

cation of turbosupercharging in automobile engines entails several specific design problems which call for scientific research and experimental designing work. There are 2 diagracs, 3 graphs, 1 table, and 2 Soviet references.

ASSOCIATION: NAMI

1. Automobile industry--USSR 2. Deisel engines 3. Turbosuper-charges--Performance

Card 2/2

PETROV, N.M., kandidat tekhnicheskikh nauk, nauchnyy redaktor; TYAPKIN, B.G., redaktor izdatel'stva; MEDVEDEV, L.Ya., tekhnicheskiy redaktor

[Large capacity excavator buckets; a collection of designs] Ekskavatornye kovahi uvelichennoi emkosti; al'bom chertezhei. Moskva, Gos. izdvo lit-ry po stroit. i arkhitekture, 1955. 112 p. (MLRA 9:12)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut organizatsii i mekhanizatsii stroitel'stva.
(Excavating machinery)

"Study of Some Questions on Mechanization of Repair Works on the Facades of City Residential Buildings." Sub 2 Feb 51, Academy of Consumal Economy imenia. Justifica Dissertations presented for science and engineering degrees in Rescow during 1951.

SU: Sum. No. 48, 9 May 55

PETROV, Bikolay Mitrofanovich; GANTMAN, Vladimir Bentsianovich; BYKOVA,
Yuliya Mikolayevna; VORONETS, V.S., otv.red.; SMIRHOV, L.V.,
red.izd-va; Sikhyar, S.Ya., teknn.red.

[Operator of tower cranes] Machinist bashennykh kranov.
Moskva, Ugletekhizdat, 1959, 183 p. (MIRA 13:1)

(Cranes, derricks, etc.)

VORONTSOV-VEL'YAMINOV, Nikolay Pavlovich, dotsent; SHAGINOV, Dmitriy Ink'yanovich, dotsent; PETROV, Nikolay Mitrofanovich, dotsent. Prinimal
uchastiye POPOV, N.N., dotsent. DOMBROVSKIY, N.G., prof., doktor
tekhn.nauk, red.; BELOV, B.A., inzh., nauchnyy red.; REYSH, A.K., inzh.,
nauchnyy red.; UDOD, V.Ya., red.izd-va; NAUMOVA, G.D., tekhn.red.

[Building machinery; album of drawings] Stroitel'nye mashiny; al'bom chertezhei. Pod red. N.G.Dombrovskogo. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1960. 5 p. 294 p. of diagrs.

1. Kafedra "Stroitel'nyye mashiny" Moskovskogo ordena Trudovogo Krasnogo Znameni inzhenerno-stroitel'nogo instituta imeni V.V.Kuybysheva (for Vorontsov-Vel'yaminov, Shaginov, Petrov). 2. Voyenno-transportnaya akademiya (for Popov).

(Building machinery)

一大 美国山东 人名英格兰人姓氏克里特

PETROV, Nikolay Mitrofanovich, dots., kand. tekhn. nauk; DOMBROVSKIY,
N.G., prof., doktor tekhn. nauk, red.; ZALENSKIY, V.S., inzh.,
nauchmyy red.; K.G.OSHCH, I.L., red. izd-va; RUDAKOVA. E.I.,
tekhn. red.

[Building and road machinery] Stroitel'nye i dorozhnye mashiny.
Fod obshchei red. E.G.Dombrovskogo. Hoskva, Gos. izd-vo lit-ry
po stroit., arkhit.i stroit.materialar., 1961. 366 [...
(MIRA 14:12)

(Building machinery) (Road machinery)

ZEN'KOV, I.S., prof.; PECROV, N.M.; KOTOVICH, B.M., lots.; GAL'FERIN, M.I., doktor tekhn. nauk; ZFL'KOV, I.S., prof., red.; TITOVA, B.V., red.

[Main trends in the mechanization and automation of the construction industry; introductory lecture for students in the construction and mechanics course. of the All-Union Engineering and construction Correspondence Institute) Osnovnye naprovlenia v mekhanizatsii i avtomatizatsii stroitelistva; vvodnaia lektsiia diia studentov stroitelinykh i mekhanicheskikh spetsialinostei VZISI, 19t1. 23 p. (EIRA 17:9)

1. Moscow. Vsesoyuznyy zaochnyy inzhenerno-strcitel'nyy institut.

ACC 18. APOQ1 (6.1) 10.00 10.0

AUTHOR: Petrov. 5. .

CRG: Institute of Physics 6 of the property of the Point Case Akademii nauk Ukrusi.

TITLE: On the dispersion theory of the magnetic dipole disintegration of magnetic dipole disintegration dipole disintegration dipole disintegration dipole distribution dipole displaced dipole dipole displaced d

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 2, 1966, 301-305

TOPIC TAGS: nuclear reaction, nuclear-disintegration, gamma ray absorption, deuteron, dispersion equation, scattering matrix,

ABSTRACT: The author employs dispersion theory and the nonlocal nuclear interaction potential of Y.Yamaguchi, (Phys. Rev., 95,1628 (1954)) to discuss the magnetic dipole disintegration of the deuteron with the unphysical singularities associated withthe finite range of nuclear forces taken into account. A dispersion relation is derived for the matrix element for the magnetic dipole photodisintegration of the deuteron, and from it, with the aid of the condition that the scattering matrix be unitary, an integral equation for the matrix element is obtained. The exact solution of the integral equation is obtained and, in order to determine the effects of the unphysical

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ACC NR: AP6019622

singularities, approximate solutions are found in which one or both of the unphysical singularities are neglected. The results, together with those obtained by different authors using different methods, are presented as curves giving the magnetic dipole photodisintegration cross section as a function of energy. The effect of the unphysical singularity associated with the finite range of nuclear forces in the singlet (triplet) state is to increase (decrease) the cross section; the cross section calculated by omitting both of the unphysical singularities is very close to that calculated by taking both of them into account. The author thanks A.G.Sitenko and V.F.Kharchenko for valuable advice and discussions. Orig. art. has: 18 formulas and 2 figures.

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O3 OTH REF:

005

Card 2/2-1

PETRON, N.M. [Petrov. M.M.]

Lespersion theory of magnetic dipole protonisinte, restion of the deuteron. Windin, show, 10 no.10:10:5-10:0 to., (Mill. 19:1)

1. Institut Claim. AV Urmula, Riyev. Submitted leterated 1: 1964.

REBROV, A.S., inzh. [deceased]; USFENSKIY, V.F., inzh.; FLESHKOV, D.I., kanc. tekhm. nauk; BELEN'KIY, V.I., inzh.; bAZANOV, BERNADSKIY, G.I., inzh.; VALUTSKIY, I.I., inzh.; bAZANOV, A.F., kanc. tekhm. nauk; KOGAN, I.Ya., kanc. tekhm. nauk; katnek, A.I.; VOROB'YEV, A.A., inzh.; BAUNAN, V.A., kanc. tekhm. nauk; NOSENKO, N.Ye., kanc. tekhm. nauk; FOKIN, M.V., inzh. [deceased]; VINOCRADOV, G.V., inzh.; GUSAKOV, E.A., inzh.; SUDAKOVICH, D.I., inzh.; Prinimali uchastiye: SIGAL', Ya.Ye., inzh.; TITCV, M.A., inzh.; OGIYEVICH, V.Ya., kanc. tekhm. nauk, retsenzent; LAFIA, F.A., inzh., retsenzent; PETROV, K.M., kanc. tekhm. nauk, retsenzent; KYAKHIN, V.A., kand. tekhm. nauk, retsenzent; KHOLIN, N.A., inzh., retsenzent

mashiny; sprayochnik. 1zd.3., perer. i doj. Moskva, Mashinostroenie, 1965. 788 p. (MIRA 18:6)

PETROV, N.M., assistent

Clinical picture of the blood in present-day typhus fever. Zdrav.
Belor. 6 no. 5:22-23 My '60. (MIRA 13:10)

1. Iz kafedry infektsionnykh bolezney vzroslykh Leningradskogo
pediatricheskogo meditsinskogo instituta.
(TYPHUS FEVER) (BLOOD—EXAMINATION)

SHELEPIN, M.N.; PETROV, N.N.

Semiautomatic control stations in oil fields. Neftianik 1 no.9:31 S '56. (MLRA 9:11)

1. Glavnyy inzhener Neftepromyslovogo upravleniya Malgobekneft' for Shelepin). 2. Glavnyy energetick Neftepromyslovogo upravleniya Malgobekneft' (for Petrov).

(Oil fields--Equipment and supplies) (Automatic control)

BATANOV, G.M.; PETROV, N.N.

Emission of electrons from glass induced by helium and argon ions. Fiz.tver.tela 1 no.12:1856-1858 D '59. (MIRA 13:5)

1. Politekhnicheskiy institut im. M.I.Kalinina, Leningrad. (Electrons) (Glass)

PETROLA, N. I.

AUTHORS: Wandel baum, Ya, A., Mel'nikov, N. N., Petrova, N. I. 73-2-12/61

TITLE: From the field of the Organic Insecticides and Fungicides (Iz

oblasti organiches kikh insektofungitsidov)
XXXII. The Synthesis of Some Eixed Ethers of Thiophosphoric Acid
(XXXII. Sintez nekotorykh smeshannykh efirov tiofosfornov kisloty).

THE RESERVE OF THE PARTY OF THE

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 2, pp. 479-480 (USSR).

ABSTRACT: The reaction between mixed dialkylchlorthiophosphate and methanol, ethanol resp. was investigated in the presence of caustic soda. It is found that the corresponding trialkylthiophosphates are obtained with good yields (70-94%,0) in the reaction. The reaction can schematically be represented as follows:

RO PSC1 + R"CH + NACH + RO PSOR" + NAC1 + H2O

The major part of the compounds obtained have hitherto not yet been

mentioned in technical literature. The specific properties of the obtained compounds as well as the preparation process are given.

There are 1 table, and 3 Slavic references.

Card 1/2

Organic Insecticides and Fungicides

73-2-42/64

ASSOCIATION: Scientific Institute for Fertilizers, Insecticides and Fungicides (Nauchnyy institut po udobreniyam i insektofungitsidam).

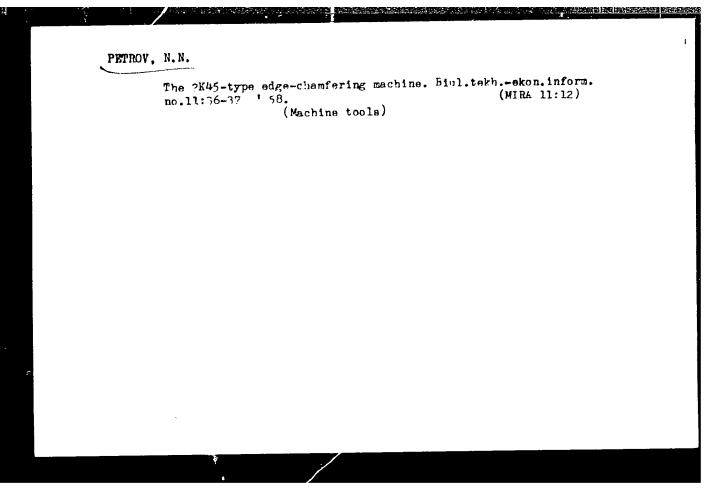
SUBMITTED: January 16, 1957.

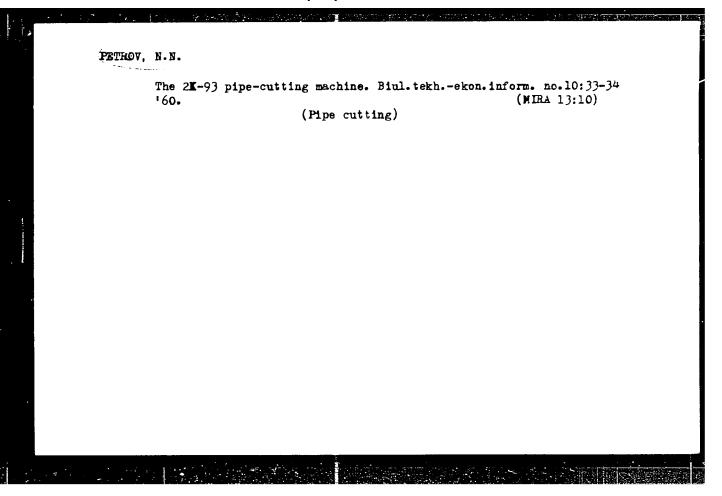
AVAILABLE: Library of Congress.

Card 2/2

PETROV, N.N., kand.ekon.nauk, dotsent. Using statistical accounting in analysing efficiency of new machinery in construction. Trudy MIEI no.9:285-292 58. (MIRA 11:6)

(Building machinery)





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A PROPERTY OF THE PROPERTY OF

AUTHOR:

Petrov, N. N.

TITLE:

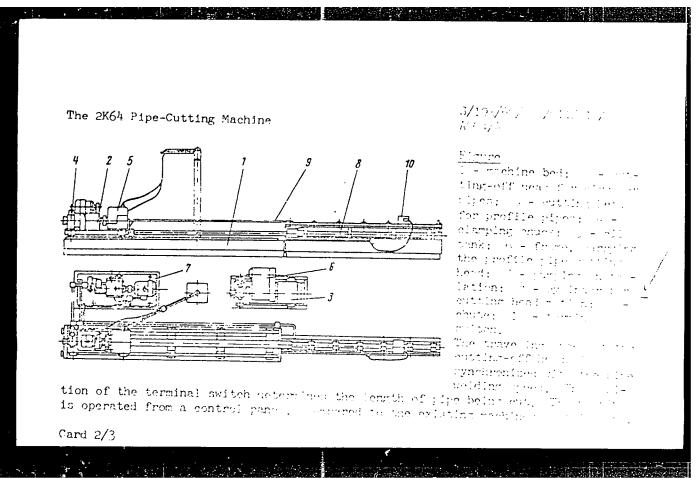
The 2K64 Pipe-Cutting Machine

PERIODICAL: Byulleten' tekhniko-ekonomicheskoy informatsii, 194, 16, 11.

pp. 23-25

In 1960 the Kramatorskiy zavod tyazhelykh stankov (Kramatorsk Plant TEXT: of Heavy Machine Tools) built the model CYGL pipe-cutting machine, designed by the Osoboye konstruktorskoye byuro (Special Design Office) We. 2 of the Euspenimental nyy nauchno-issledovatel skiy institut metallorezhusechikh stankay (kejeri mental Scientific Research Institute of Metal Cutting Toolar. The married be incorporated in the line of the electric pipe-welding mill for the worth was production of pipes from steel strips (low-carbon and low-alloyed steel). The machine is cutting off pipings of certain lengths with the aid of either three disk blades (for pipes of circular cross-section) or a special outting-off took with friction saw (for profile pipes). The cutting heads have a reciprociting motion since cutting is carried out while the gipes are moving. The ille turnion shows the design of the pipe-outting machine.

Card 1/3



The 2K64 Pipe-Cutting Machine

ACONTACK.

the author claims the following advantages of the 2K64 pipe-outting matrice. The efficiency was doubled, while deviations from the fixed pipe length were reduced, the travel stroke of the outting-off heads, depending on the diameter, with the ness and traveling speed of the pipes, is adjusted automatically. The following technical specifications are given diameter of pipes being sut = 10-76 mm, was thickness of pipes = 0.8 - 1 mm, maximum number of cut: -6 per minute, specific rom of cutting head for circular pipes = 0.90 - 0.90 - 0.90 mm, maximum travel for profile pipes = 0.420, diameter of friction disk = 0.90 mm, maximum travel stroke of cutting-off head = 0.420 mm, total power of electromotors = 0.90 kW, overal, dimensions length x width x height. = 0.90 x 3,000 x 3,000 mm, walker (including electric equipment = 0.90 tors. There is one figure.

Card 3/3

Elfet. Of the Elmonton of the release establish from metals, it is discussed. Supplied that the Miss of the Miss o
1. Leningradskip literatur nesk y institut.

AT/WW/JD/HW/JG L 36319-66 EWT(1)/EWT(m)/EWP(t)/ETI IJP(c) ACC NR: APG015787 (A,N) SOURCE CODE: UR/0048/66/030/005/0868/0869 27 AUTHOR: Dorozhkin, A. A.; Petrov, N. N. OM: Leningrad Polytechnic Institute im. M.I.Kalinin (Leningradskiy politechnicheskiy institut) TITL: Dependence of the ion-electron emission of some metals on the hydrogen pressure Teport, Twelfth All-Union Conference on the Physical Bases of Cathode Electronics held in Learngrad 22-26 October 1965/ SOME: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 5, 1966, 868-869 TOPIC TAGS: electron emission, ion bombardment, hydrogen ion, gas pressure, copper, nickel, molybdenum *BIC ACT: The electron emission due to bombardment with 8.4 keV $\rm H_2^+$ ions of Mo, Ni, and $\rm CC$ has been measured at room temperature and $\rm 1100^{\circ}$ K, and at $\rm H_2$ pressures from $\rm 10^{-6}$ to 0.3 mm Hg. The residual gas pressure did not exceed 3 x $\rm 10^{-8}$ mm Hg. The $\rm H_2^+$ ion been was produced with the aid of a gas discharge ion source and a magnetic mass monochrometer described elsewhere by the authors (Zh. Tekhn. fiz., 33, 350 (1963)). The metals were subjected to a preliminary high temperature anneal. The electron emission of Mo was found to be independent of the H pressure at both investigated temperatures. The emission of Ni and Cu was independent of pressure at pressures below about 0.01 mm Card 1/2

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Ng. At room temperature the emission of Ni was independent of pressure at all pressures investigated, and at 1100° K it decreased to 65% of its high vacuum value at 0.3 mm Hg. is room temperature the emission of Cu Increased to 230% of its high vacuum value at 0.3 mm Hg, and at 1100° K it decreased to 60% of its high vacuum value at 0.3 mm Hg. It is suggested that the temperature dependence of the ion-induced electron emission is associated with the character of the chemisorption of H2 onto the metal surface. The authors thank M.A. Yeremeyev for his interest. Orig. art. has: 2 figures.

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OTH REF: 000

Cord 2/2

APPROVED FOR RELEASE: 06/15/2000

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L 36322-66 EWT(1)/EWT(m)/T/EWF(t)/ETI IJP(c) G9/AT/JD/JG ACC NR: 1P6013752 (A, N) SOUNCE CODE: UR/0048/66/030/005/0834/G309	
AUTHOR: Abroyan, I. V.; Yeremeyev, M. V.; Petrov, N. N.	
OM: Leningrad Polytechnic Institute im M. I. Kalinin (Leningradshiy peli more), - kiy institut)	
The little deconductivity and secondary emission of semiconductors and dielectrics under sostaive ion bombardment Report, Twelfth All-Union Conference on the Physical Base of Cathode Electronics held in Leningrad 22-26 October 1965/	1
GOT ME: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 5, 1966, 884-889	
TCPIC TAGS: alkali halide, single crystal, germanium, secondary electron emission, electric conductivity, ion bombardment	
Processes Laboratory of the electronics Department of the Leningrad Polytechnic Institute concerning electron emission under ion bombardment of halkali halider and germanium single crystals and conductivity induced in germanium drystals by ion bombardment. For fixed energy of incident atomic ions the secondary emission coefficient of an establibility halide crystal decreased with increasing ion mass; the coefficient for 0.6 keV in ions incident on the (100) face of an NaCl crystal was 2, and for 0.6 keV Artions the secondary emission coefficients at the secondary emission coefficient was 0.7. The secondary emission coefficients at 0.0 keV incident ion energy for Ht, H2, and H3 ions were approximately equal, but	:
Cord 1/2	

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at 10 keV the secondary emission coefficients for hydrogen molecular ions were greater than for protons, and the data were not compatible with the hypothesis that the molecular ion dissociates in the first collision. The secondary emission coefficient decreased with increasing temperature of the crystal; this is ascribed to scattering of electrons on their way to the crystal surface by phonons. Measurements were made at incident ion energies down to 10 eV. Different ions behaved very differently at very low energies; for some ions (He+ and Ne+ on alkali halide crystals) the secondary emission coefficient remained finite at the very lowest energies, whereas for other ion: their wasa threshold energy below which secondary emission did not occur. The conductivity induced in germanium crystals by a unit flux of bombarding ions increased with increasing ions energy and decreased with increasing ion mass. From a comparison of the conductivity induced by ion bombardment with that induced by electron bombardment it was estimated that a 100 eV K+ inon incident on germanium gives rise to about 6 electron-hole pairs. When the incident ion energy was equal to the threshold value of F.Seitz (Disc. Faraday Soc., 5, 271 (1949)), at least 30 % of the energy of incident II ions and 5 % of the energy of K ions was expended in inelastic collisions. The induced conductivity was maximum and the secondary emission coefficient was minimum when the ions were incident in one of the "transparent" directions [110], [111], and [112]. From a comparison of the induced conductivity and secondary emission coefficients of germanium for electron and K+ ion bombardment, it was estimated that only one in several thousand of excited electrons escapes from the crystal. Orig. art. has: 1 formula, 7 figures, and 1 table.

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L 36323-66 EWT(1)/EWT(m)/T/EWF(e)/EWP(t)/ETI ACC NR. APG015793 IJP(c) AT/WH/JD/J3 SQUIRCE CODE: UR/0048/66/030/005/0890/0891 AUTHOR: Makarov, V. V.; Petrov, N. N. O.G. Leningrad Polythechnic Institute im. M.I.Kalinin (Leningradukty polite. Institute im. Tivil: Penetration of 2 to 11 keV lithium ions into silicon carbide single crystals Acpoint, Twelfth All-Union Conference on the Physical Bases of Cathode Electronics held in Leningrad 22-26 October 1965/ SCHICE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 5, 1966, 890-891 TOPIC TAGS: cathodoluminescence, ion beam, radiation damage, lithium, silicon carbide, MCT: The cathodoluminescence of SiC single crystals (α modification) previously bonbarded with "-11 keV Lit ions has been investigated in order to determine the penecration depth of the ions. Plates cut parallel to the (0001) faces were bembarded with monoenergetic Li⁺ ions (dose, 10¹⁶ ions/cm²), and the intensity of the 5200 Å Connoiolisainescence of each plate was subsequently determined at 77° K as a function the energy of the exciting electrons. Luminescence was observed only when the electron energy exceeded a threshold value which depended on the energy of the ions which the crystal had previously been bombarded. It was assumed that the penereaction depth of the bombarding ions was equal to that of electrons having the thresh-Card 1/2

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old energy. To convert the cathodolominescence thresholds to ion percention copius, it is necessary to know the penertration depths of electrons of different one lies. As electron penetration data are lacking for SiC, the data of A.Ya.Vyaishin and A.F. Machov (Zh. tekhn. fiz., 28, 740 (1958)) for Si were used instead. The penetration depth in \ of a Li ion with an energy of 2 keV was found to be 35.020.77 . These penetration depths are several times greater than those found by McCargo, F.Brown, and A.I.Davies (Canad. J.Chem. 41, 2309 (1963)) for penetration of Na⁺ ions into A1, and are very close to those found by J. Young (J. Appl. Phys., 27, 1 (1956)) for penetration of H+ and He+ ions into Al. The authors thank M.A. Yeremeyev for valuable discussions and M.B.Reyfman for providing the SiC crystals. Orig. art. has: 2 figures.

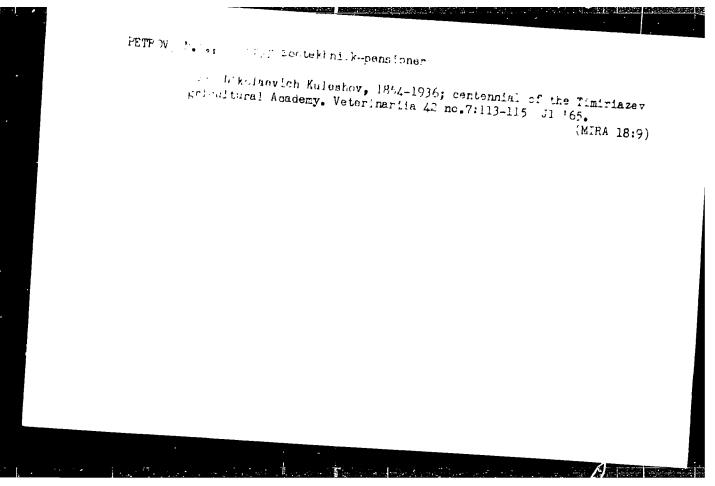
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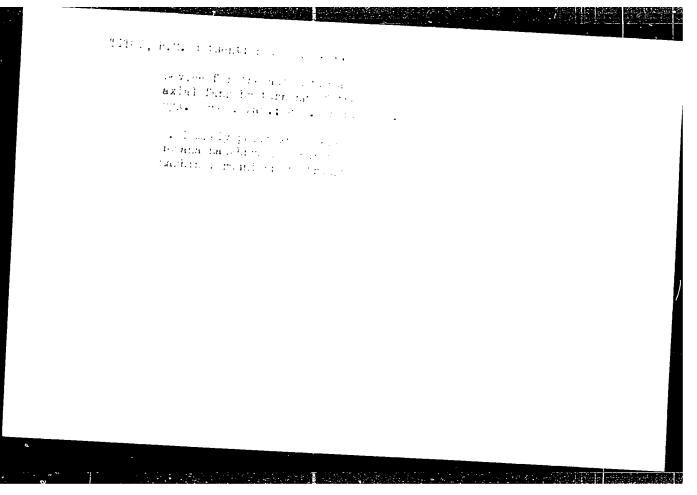
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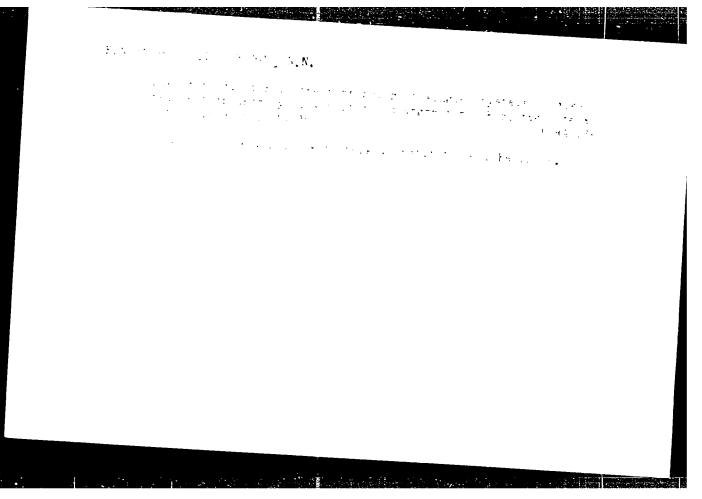
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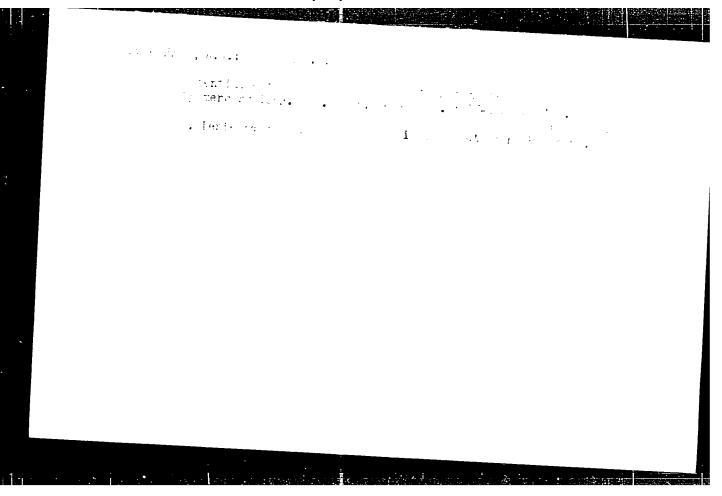
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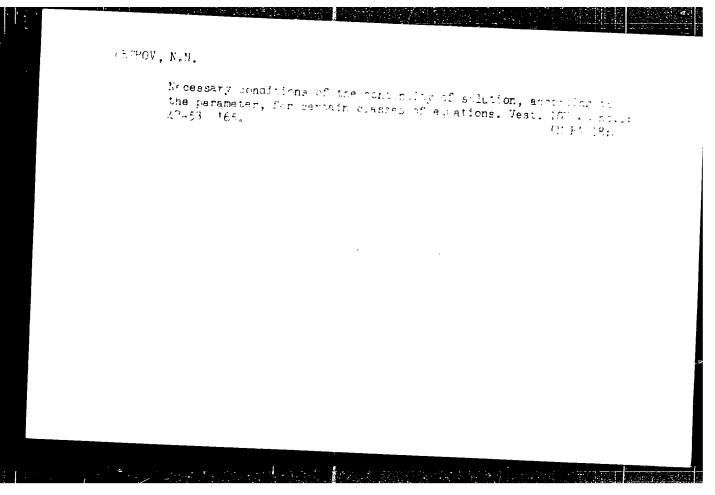






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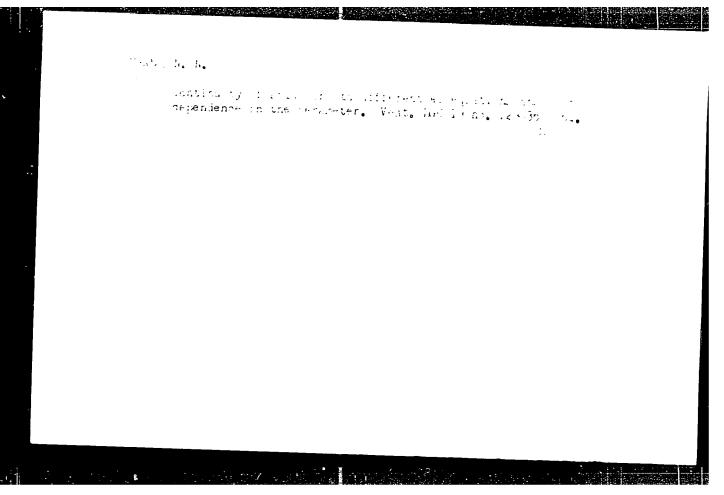
<u>L-12918-65</u> EWT(1)/EPA(a)-2/EWT(m)/EPP(c)/EPA(w)-2/EEC(t)/T/EWP(b)/EWA(m)-2 Pab-10/Prn4/Pt-10 IJP(c) JD/WW/JG ASD(t)-2/BSD/AS(mp)-2/APWL/ASD(p)-3/ ASD(a)=5/ASD(d)/ASD(m)=3/SSD/ESD(gs)/ESD(t) ACCESSION NE: AP4045292 8/0048/64/028/009/1418/1422 AUTHOR: Babarov, V.V.; Petrov, N.N. TITLE: Effect of ion bombardment on the secondary emission of metals Asport, Tenth Conference on Cathode Electronics held in Kiev, 11-18 Nov 1963/ SOURCE: AN, SSSR. Izvestiya, Seriya fizicheskaya, v. 28, no. 9, 1964, 1416-1422 TOPIC TAGS: ion bombardment, secondary emission, ion emission, electron emission, tungsten, potassium, casium ABSTRACT: The mission of secondary long and electrons by a tungsten target bombarded with 1 to 11 keV R or Ce? lone was measured, and its dependence on the duration of the bombardment and the temperature of the target was investigated in or der to determine the influence on secondary smission of advorced lone and lone that have presented into the target. The best from the lon source was purged of new rall smith by double electrostatic deflection before peint accompanies we had find accompanies on the larget at 40° the secondary purchase were collected in all streetices and could be distinguished with respect to the sign of their charge and to some extent with respect to energy by means of a grid and appropriate 1/3

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ACCESSION NR: AP4045292

returding Aelds. The Secondary emission of a Tresh target was determined at temperatures above 1400°K. Before each series of measurements the target was heated at 2200°K and flashed to 2500°K, and before each measurement (which was made as rapidly as possible) the target was reflashed to 2000°K. Measurements made under these conditions were reproducible. The secondary electron emission was found to increase linearly with the energy of the incident ions for energies greater than about 3 keV. The secondary lons were found to contain a greater proportion of relatively high energy lons at moderate incident ion energies (about 2 keV) than at higher energies. This effect was more marked for Kt than for Cst lons. When the target was bombarded continuously (5 x 10-8 A on an 0.2 cm2 area) the secondary ion emission ratio increased with time until, after long continued bombardment (of the order of 10 min, depending on circumstances), it reached a large steady value (90%) independent of the beam energy. Under some conditions the secondary emission decreased during the first lew tens of seconds of Dombardment and passed through a minimum before beginning to rise. When the beam was cut off after long continued bomburdment the secondary current did not drop at once to zero, but fell to some finite value, from which it subsequently decreased with time; Under some conditions the following "flare-up" phenomenon was observed; when the beam was cut off the ion current would first drop and then rise for a few seconds and pass through a maximum

1/12918-65 ACCESSION NR: AP4045292		2
before dying slowly away. It tion of low energy secondary fresh. The results are disciface of the target and the image authors are deeply gratemarks. Originart.has: 7 fig.		itted a granter propor- ulment than when it was sorbed loss to the sur- target work immetion. breat and valuable re-
ASSOCIATION: L'eningradskiy tute)	olitokhnicheskiy institut (Lening	rad Polytechnic Insti-
SUB-CODE: NP, EM	MI REF BOY; D14 - 12	BNCL; OO OMER; OOA
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[Eoniocal problems in the theory of oscillations Nelokul'nye problems teorif homosenii. Moskwa, izz-vo
"hanka," 19th... 36% p. (Mind. 17:5)

"On a case of existence of the periodic solution"

Report presented at the 2nd All-Union Congress on Theoretical and Aprilied Machanics, Moscow 29 Jan - 5 Feb 64.

L-25114-65 / EPA(s)-2/EMT(m)/EPF(n)-2/EMF(b)/EMP(t) Pt-10/Pu-4 IJP(c) JD/JG ACCESSION NR: AP5003422 8/0181/65/007/001/0118/0122

AUTHORS: Dorozhkin, A. A.; Petrov, N. N.

TITLE: Potential extraction of electrons from tungsten and molybedenum by mercury lons

SOURCE: Fizika tverdogo tela, v. 7, no. 1, 1965, 118-122

TOPIC TAGS: tungsten, molybdenum, electron emission,/potential emission, temperature dependence

ABSTRACT: The purpose of the investigation was to determine the ion-electron emission induced from tungsten and molybdenum by positive singly-charged mercury ions over a wide target temperature range. The mercury ions had energies from 500 to 2800 eV, and the measurement procedure was that described by one of the authors elsewhere (Petrov, FTT v. 2, 949, 1960). A monokinetic ion beam, periodically modulated in intensity with a specified frequency, was di-

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ACCESSION NR: AP5003422

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rected to the target. A tank circult tuned to the same frequency served as a load for the measured currents of primary and secondary particles. A block diagram of the test setup is shown in Fig. 1 of the enclosure: The system made it possible to measure the primary current of the particle bombarding the target, the current in the collector circuit (secondary particle current), and the current in the circuit of a screen located behind the target to control the ions striking it. A vacuum of not less than $2-3 \times 10^{-7}$ mm Hg was maintained. The results show that only potential extraction of the electrons is produced by the bombarding lons in pure tungsten and molybdenum targets; this extraction depends noticeably on the temperature of the metal. Neither kinetic nor potential extraction of the electrons from tungsten by Ar lons with energy from 0.5 to 8 keV depends on the temperature over the entire range from 300 to 2100K; The data obtained are discussed from the point of view of a two-stage extraction of the electron, consisting of resonant newtralization with a subsequent de-excitation by means of the Auger

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PETROV, N.N.; DOROZHKIN, A.A.

Emission of electrons from tungsten by some positive ions. Fiz. tver. tela 3 no.1:53-60 Ja '61. (Mir. 14:3)

1. Politekhnicheskiy institut im. M.I.Kalinina, Leningrad. (Electron emission) (Tungsten)

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BABCHIN, I.S., prof.; BABANCVA, A.G., doktor med. nauk; BLOKHIN, N.N., prof.; BONDARCHUK, A.V., prof.; GAL'PERIN, M.D., prof.; GOL'DSHTEYN, L.M., prof.[deceased]; DYMARSKIY, L.Yu., kand. med. nauk; KARPOV, N.A., prof.; KOYRO, M.A., nauchn. sotr.; LARIONGV, L.F., prof.; LITVINOVA, Ye.V., kand. med. nauk; MEL'NIKCV, R.A., kand. med. nauk; NECHAYEVA, I.D., doktor med. nauk; PETROV, Nikolay Nikolayevich, prof.; PETROV, Yu.V., kand. med.nauk; RAKOV, A.I., prof.; ROGOVENKO, S.S., kand. med. nauk; SENDUL'SKIY, I.Ya., prof.; SEREBROV, A.I., prof.; SMIRNOVA, I.N., kand. med. nauk; TAL'MAN, I.M., prof.; TOBILEVICH, V.P., prof.; TRUKHALEV, A.I., kand. med. nauk; KHOLDIN, Semen Abramovich, prof.; CHEKHARINA, Ye.A., kand. med. nauk; CHECHULIN, A.S., kand. med. nauk; SHAAK, V.A., prof.[deceased]; SHANIN, A.P., prof.; SHAPIRO, I.N., prof.[deceased]; SHEMYAKINA, T.V., kand. med. nauk; SHERMAN, S.I., prof.; ABRAKOV, L.V., red.; LEBEDEVA, Z.V., tekhn. red.

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(MIRA 15:7)

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(CANCER RESEARCH)

PETROV, N.N., prof. (Leningrad, ul. Saltykova-Shchedrina, d. 41, kv.1)

Long-term anatomical and functional restoration of the elbow joint following total resection for osteochondroma. Vest.khir. 85 no.12:27-32 D °60. (MIRA 14:1)

L 46940-66 FWT(1)/FWP(e)/EWT(m)/EWP(t)/ETI IJP(c) JD/JG/AT/WH
ACC NR: AP6015489

SOURCE CODE: UR/0181/66/008/005/1602/1607

AUTHOR: Makarov, V. V.; Petrov, N. N.

79 71

ORG: Leningrad Polytechnic Institute im. M. I. Kalinina (Leningradskiy politekhni-

TITLE: Effect of ion bombardment on the cathodoluminescence of Sic

SOURCE: Fizika tverdogo tela, v. 8, no. 5, 1966, 1602-1607

TOPIC TAGS: cathodoluminescence, silicon semiconductor, silicon carbide, ion bombard-ment

ABSTRACT: Cathodoluminescence spectra of 6H SiC crystals were examined during bombardment by K' with energies in the 2 to 11 kev range. The ions of K' were produced by thermal dissociation of $K_2\text{CO}_3$. Bombardment and heating up to 1000°C produced a considerable change in the spectral composition of the radiation in the photon energy range of 2.64 to 2.45 ev. In this range, a system of narrow intense lines and bands with a halfwidth of 0.002 to 0.1 ev was observed. Narrow lines also appeared in the 2.86 to 2.69 and 2.52 to 2.2 ev ranges, even though ion bombardment is not a necessary condition for their appearance. The cathodoluminescence spectra of opposite crystal sides differ in these photon energy intervals. The emergence of a green band after bombardment of the order of 10^{17} particles per cm² and subsequent heating to 1200°C may be

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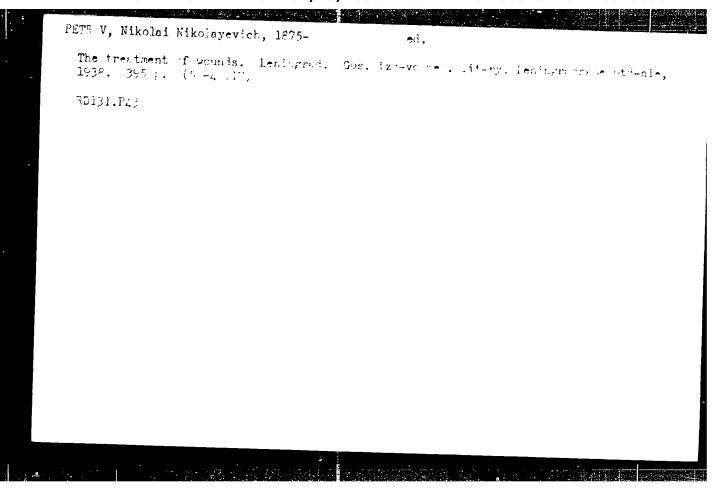
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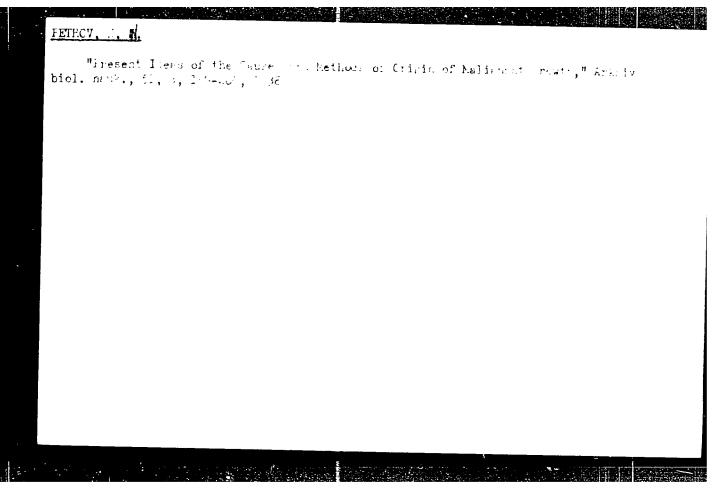
explained by the presence of Al-N donor-acceptor pairs. The authors are grateful to M. B. Reyfman for making SiC single crystals available for the experiments, to Yu. A. Vodakov for making specimens available with a known concentration of impurities, to M. A. Yeremeyev for his interest in the work and his valuable suggestions, and to V. I. Sokolov for the useful discussions. Orig. art. has: 5 figures.

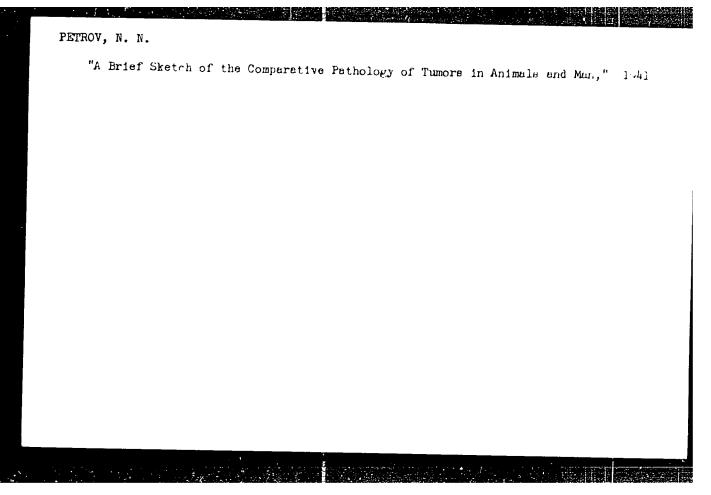
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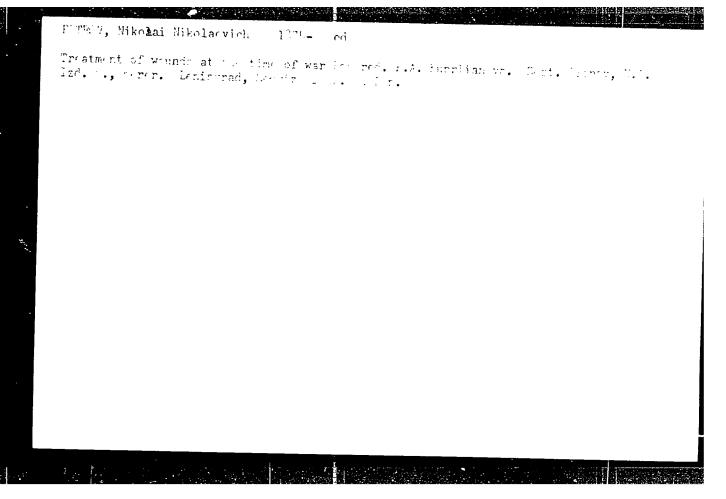
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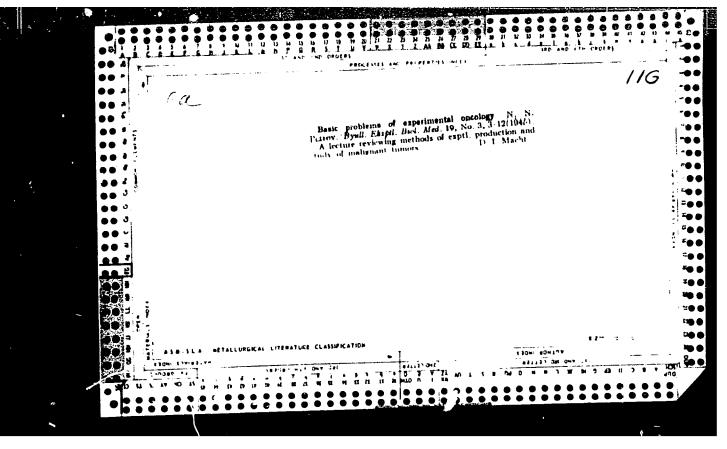


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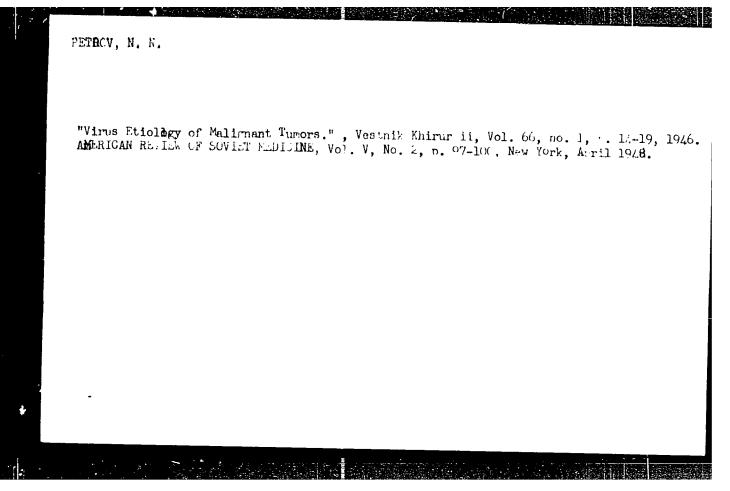
1. Wounds - Treatment. 2. Surgery, Military. I. Kupriianov, Petr Andreevich, Jt.ed.



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